Amendment to the Claims:

1. (currently amended) A hybrid dehumidification system, comprising:

a compressor, a condenser, an expansion device and an evaporator connected for flow of working fluid through a circuit;

a reheat coil positioned relative to the evaporator for heating at least a portion of a stream of air passing through the evaporator;

a condenser bypass circuit connected between the working fluid circuit upstream of the condenser and the working fluid circuit downstream of the condenser; and

working fluid directing means for flowing working fluid in at least two modes of operation selected from a group of modes consisting of:

a cooling mode wherein working fluid flows sequentially from the compressor to the condenser, from the condenser to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a cooling and enhanced dehumidification mode wherein working fluid flows sequentially from the compressor to the condenser, from the condenser to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a dehumidification without substantial sensible capacity mode wherein working fluid flows sequentially from the compressor to the reheat coil, from the reheat coil to the condenser, from the condenser to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a heating and dehumidification mode wherein working fluid flows sequentially from the compressor to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor; and

a dehumidification with variable sensible capacity mode wherein working fluid flows sequentially from the compressor in a first portion to the condenser and in a second portion through the condenser bypass circuit around the condenser, the first and second portions then flow to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor.

2. (Currently amended) ~~The system of claim 1~~ A hybrid dehumidification system, comprising:

a compressor, a condenser, an expansion device and an evaporator connected for flow of working fluid through a circuit;

a reheat coil positioned relative to the evaporator for heating at least a portion of a stream of air passing through the evaporator; and

working fluid directing means for flowing working fluid in at least two modes of operation selected from a group of modes consisting of:

a cooling mode wherein working fluid flows sequentially from the compressor to the condenser, from the condenser to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a cooling and enhanced dehumidification mode wherein working fluid flows sequentially from the compressor to the condenser, from the condenser to the reheat coil, from the

reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a dehumidification without substantial sensible capacity mode wherein working fluid flows sequentially from the compressor to the reheat coil, from the reheat coil to the condenser, from the condenser to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a heating and dehumidification mode wherein working fluid flows sequentially from the compressor to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor; and

a dehumidification with variable sensible capacity mode wherein working fluid flows sequentially from the compressor in a first portion to the condenser and in a second portion around the condenser, the first and second portions then flow to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor, wherein the working fluid directing means comprises means for selectively flowing working fluid in all of the modes of operation.

3. (Currently amended) ~~The system of claim 1~~ A hybrid dehumidification system, comprising:

a compressor, a condenser, an expansion device and an evaporator connected for flow of working fluid through a circuit;

a reheat coil positioned relative to the evaporator for heating at least a portion of a stream of air passing through the evaporator; and

working fluid directing means for flowing working fluid in at least two modes of operation selected from a group of modes consisting of:

a cooling mode wherein working fluid flows sequentially from the compressor to the condenser, from the condenser to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a cooling and enhanced dehumidification mode wherein working fluid flows sequentially from the compressor to the condenser, from the condenser to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a dehumidification without substantial sensible capacity mode wherein working fluid flows sequentially from the compressor to the reheat coil, from the reheat coil to the condenser, from the condenser to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a heating and dehumidification mode wherein working fluid flows sequentially from the compressor to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor; and

a dehumidification with variable sensible capacity mode wherein working fluid flows sequentially from the compressor in a first portion to the condenser and in a second portion around the condenser, the first and second portions then flow to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor, wherein the working fluid directing means comprises:

a reheat coil segment connected between the working fluid circuit upstream of the condenser and the reheat coil, and between the reheat coil and the working fluid circuit downstream of the condenser and upstream of the expansion device;

a warm liquid reheat segment connected between the working fluid circuit downstream of the condenser and the reheat coil;

a reheat working fluid recycling segment connected between the reheat coil and the working fluid circuit upstream of the condenser; and

a condenser bypass circuit connected between the working fluid circuit upstream of the condenser and the working fluid circuit downstream of the condenser.

4. (Original) The system of claim 3, further comprising a first three-way valve positioned between the working fluid circuit and the reheat segment, a second three-way valve positioned between the working fluid circuit and the reheat working fluid recycle segment, and shutoff valves positioned in the reheat working fluid recycle segment, the reheat segment and the condenser bypass segment.

5. (Original) The system of claim 4, wherein at least one of the first and second three-way valves and the shutoff valves is a regulating valve.

6. (Original) The system of claim 4, further comprising a control member adapted to operate the first and second three-way valves and the shutoff valves based upon operating demands on the system.

7. (Currently amended) A method for operating a hybrid dehumidification system, comprising the steps of:

providing a refrigeration system comprising a compressor, a condenser, an expansion device and an evaporator connected for flow of working fluid through a circuit; a reheat coil positioned relative to the evaporator for heating at least a portion of a stream of air passing through the evaporator; and working fluid directing means for selectively flowing working fluid in each of a group of modes of operation comprising ~~at least two modes of operation selected from a group of modes consisting of~~:

a cooling mode wherein working fluid flows sequentially from the compressor to the condenser, from the condenser to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a cooling and enhanced dehumidification mode wherein working fluid flows sequentially from the compressor to the condenser, from the condenser to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a dehumidification without substantial sensible capacity mode wherein working fluid flows sequentially from the compressor to the reheat coil, from the reheat coil to the condenser, from the condenser to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

a heating and dehumidification mode wherein working fluid flows sequentially from the compressor to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor; and

a dehumidification with variable sensible capacity mode wherein working fluid flows sequentially from the compressor in a first portion to the condenser and in a second portion around the condenser, the first and second portions then flow to the reheat coil, from the reheat coil to the expansion device, from the expansion device to the evaporator and from the evaporator to the compressor;

sensing a desired mode of operation from the group of modes; and

operating the working fluid directing means to provide the desired mode of operation.

8. (Original) The method of claim 7, wherein the sensing step comprises sensing at least one value selected from the group consisting of indoor temperature, outdoor temperature, humidity, suction pressure, discharge pressure, saturated suction temperature, saturated discharge temperature, return air temperature, supply air temperature, supply air enthalpy and return air enthalpy, and combinations thereof, and using said at least one value to determine said desired mode of operation.